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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,549	11/27/2001	Shunpei Yamazaki	07977-124003	1184

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EXAMINER

LEE, GRANVILL D

ART UNIT	PAPER NUMBER
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2825

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/995,549

Applicant(s)

YAMAZAKI ET AL.

Examiner

Granvill D Lee, Jr

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/19/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

A drawing is objected to because of a typographical error that occurs therein, namely drawing 3c contains the error. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application

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filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Nishimura et al. (US Pat. 5,514,880).

In view of claims 1, 4, 7, 10, 13 and 16, SRAM (static read access memory) comprising: a substrate (Fig. 4 #1), a pair of cross-coupled (Col. 1 lines 55-65) driver transistors (Fig. 83 Q1 and Q3) formed on the substrate, a pair of access transistors (Q5 and Q6), a pair of lines electrically connected (#33 and #34) to the coupled driver transistors through the access transistors, respectively; with line transistors, wherein at least each electrically connected to the pair of access of the cross-coupled transistors comprises a crystalline semiconductor film formed on an insulating surface (#42) over the substrate, the crystalline semiconductor film having a mono domain region in which a channel formation region is formed (Col. 10 lines 45-55). In continued view of claims 7 and 10, Nishimura et al. suggests that crystal grains exist in a direction parallel (Fig. 8a) to the channel length, a major surface of the substrate (as shown).

In view of claims 2,5, 8,11,14 and 17 Nishimura et al. forms a channel region, which does not include a grain boundary (Abstract).

In view of claims 3, 6, 9, 12,15 and 18 Nishimura et al. maintains that the grain boundary in the crystalline region has none or little current values (Col. 15 lines 25-35).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19-20,22-25,27-31,33-37,39-43,45-49 and 51-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura et al. in view of Lawson (US Pat. 5,541,640).

In view of these claims, Nishimura et al. creates a SRAM comprising: a substrate, a pair of cross-coupled driver transistors formed on the substrate, a pair of access transistors, a pair of lines electrically connected to the coupled driver transistors through the access transistors, respectively, and with line transistors, wherein at least each electrically connected to a pair of access of the cross-coupled transistors comprises a crystalline semiconductor film formed on an insulating surface over the substrate, the crystalline semiconductor film having a mono domain region in which a channel formation region is formed. But Nishimura et al. fails to consider the uses for which SRAM's benefit. Lawson considers SRAM devices most essential for the memory portion of a many devices. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the cross-coupled transistor techniques of Nishimura et al. with the SRAM

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telecommunication system of Lawson so that the advantages of a basic storage system can be realized in a variety of devices (Col. 12 lines 8-15).

In view of claims 20, 25, 31, 37, 43 and 49 Lawson utilizes video and other "display means" for producing and transmitting images (Col. 3 line 55-Col. 4 line 15).

In view of claims 23, 28, 34, 40, 46 and 52 Lawson saw intense use of a video camera system using the SRAM technology (Abstr.).

In view of claims 24, 29, 35, 41, 47 and 53 Lawson enlightens video projector technology using SRAM processors (Col. 7 line 5-12).

Claims 21, 26, 32, 38, 44, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura et al. in view of Tamai et al. (US Pat. 5,731,978).

In view of these claims, Nishimura et al. creates a SRAM comprising: a substrate, a pair of cross-coupled driver transistors formed on the substrate, a pair of access transistors, a pair of lines electrically connected to the coupled driver transistors through the access transistors, respectively, and with line transistors, wherein at least each electrically connected to a pair of access of the cross-coupled transistors comprises a crystalline semiconductor film formed on an insulating surface over the substrate, the crystalline semiconductor film having a mono domain region in which a channel formation

region is formed, yet fails to account for SRAM's use in vehicle navigation systems. Tamai et al. describes a method where SRAM's are used in vehicle navigation systems. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the cross-coupled transistor techniques of Nishimura et al. with preferences for Tamai et al. navigation systems, which gathers geographical recognition algorithms into executable software programs (Col. 3 lines 47-65).

Claims 19, 22, 27, 30, 33, 36, 39, 42, 45, 48, 51 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura et al. in view of Robinson et al. (US Pat. 6,122,527).

In view of these claims, Nishimura et al. creates a SRAM comprising: a substrate, a pair of cross-coupled driver transistors formed on the substrate, a pair of access transistors, a pair of lines electrically connected to the coupled driver transistors through the access transistors, respectively, and with line transistors, wherein at least each electrically connected to a pair of access of the cross-coupled transistors comprises a crystalline semiconductor film formed on an insulating surface over the substrate, the crystalline semiconductor film having a mono domain region in which a channel formation region is formed. But Nishimura et al. fails to suggest a mobile phone system for SRAM use. Robinson et al. uses a cellular phone system, which uses SRAM

technology (Title). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the cross-coupled transistor techniques of Nishimura et al. with the SRAM mobile phone technology of Robinson et al. used many technologies in the cellular design, but saw SRAM suited better for operational and other management codes in the mobile design (#606 and #806).

Contact Information

Any inquiry concerning this communication or earlier communications for the examiner should be directed to Granvill Lee whose telephone number is (571) 272-1897. The examiner can be normally reached on Monday thru Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are not successful, the examiner's supervisor, Matthew Smith can be reached on (571) 272-1907. The fax phone number for this group is (703) 872-9306.

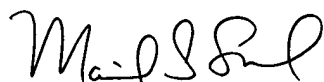
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the

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Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner
Granvill Lee
Art Unit 2825

G1
8/31/04

A handwritten signature in black ink, appearing to read "Matthew Smith".

MATTHEW SMITH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800